M/035/026

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Department of Natural Resources

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Division of Oil, Gas & Mining

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January 13, 2006

CERTIFIED RETURN RECEIPT
7002 0510 0003 8603 2526

Carl Clyde
Geneva Rock Products, Inc.
1565 West 400 West P.O. Box 538
Orem, Utah 84059

Subject: Initial Review of Notice of Intention to Commence Large Mining Operations, Geneva Rock Products, Inc.(GRP), Point of the Mountain Quarry, M/035/026, Salt Lake County, Utah

Dear Mr. Clyde:

The Division has completed our review of your draft Notice of Intention to Commence Large Mining Operations for the Point of the Mountain Quarry received November 15, 2005. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please response by **addressing only those items requested in the attached technical review** by sending replacement pages of the original mining notice or reprinting the plan **using redline and strikeout text**. After the notice is determined complete two clean copies of the plan will be requested. One copy will be returned stamped "approved" for your records.

As stated in the plan, approval for mining Phase I is being sought. The Division reviewed all the information submitted for the permit area, however, only the information required for Phase 1 was reviewed for completeness and technical adequacy. If you choose to include all phases of mining in the plan, the maps must clearly indicate that Phase 2 though 5 are conceptual and not approved for mining.

Please provide a response to this review by February 25, 2006. If you have any questions in this regard please contact Doug Jensen (538-5382) or myself. Thank you for your cooperation in completing this permitting action.

Sincerely,

Susan M. White

Susan M. White
Mining Program Coordinator
Minerals Regulatory Program

SMW:dj:pb
Attachment: Review
cc: Linda Mathews, JBR Environmental Consultants
Tony Christofferson, Geneva Rock Products

REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS
Geneva Rock Products, Inc.
Point of the Mountain Quarry

M/035/026
January 13, 2006

R647-4-105 - Maps, Drawings & Photographs

105.2 Surface facilities map
A line item in the plan discusses a slurry line extending from the wash plant to the pond on the west side of I-15.
Figure 2 – Surface facilities map does not show this feature. Please indicate the location of this line on this map. (DJ)

Figure 2 shows the location of a small retention pond outside the permit boundary area.
The text indicates that overflow water from the wash plant area enters this pond.
If part of the function of this pond is to treat water originating from the operations area, it needs to be included in the permit area. (DJ)

This portion of the plan also discusses a tank at the wash plant.
Please show the location of this tank on Figure 2. (DJ)

The maintenance/office facility is presently shown outside of the permit boundary.
Is there a maintenance facility for the mining equipment being used in the pit area? If any portion of the maintenance shop is used to maintain mining equipment, that portion of the shop should be included in the permit area. (DJ)

The text of the plan indicates that run-off water from the pit floor and facilities area drains westward through the culvert to the impoundment west of I-15.
All drainages and culverts being used to drain areas within the permit should be included as a part of the permit area. (DJ)

The permit line in the vicinity of the facilities area is confusing. The line appears to split some facilities, putting portions inside the permit area and portions outside.
Please review the placement of the permit line and adjust as necessary. (DJ)

Figure 4 – Proposed Final Pit Map shows the overall slopes as along smooth slope.
Figure 5 of the plan indicates that the final highwall will be composed of benched slopes.
Please redraft the final pit map to reflect the benched slopes or state that the ultimate highwall will be a long slope. (DJ)

R647-4-106 - Operation Plan

106.2 Type of operations conducted, mining method, processing etc.
A concrete stockpile is located within the permit area.
The surety needs to contain a line item for the processing and/or placement of this material. (DJ)

106.5 Existing soil types, location, amount

The plan needs to include information about the chemistry as it relates to plant growth of the material in the pond on the west side of Interstate 15. Although the fines will be covered with six inches of soil, they would still be within the rooting zone and would affect plant growth. Parameters needed include pH, electrical conductivity, sodium adsorption ratio, texture, and volatiles. (PBB)

The plan needs to include a commitment to test material on the ultimate pit floors for these same parameters. (PBB)

106.6 Plan for protecting & redepositing soils

Please clarify whether there will be topsoil stockpiles or if all topsoil will be live hauled. If topsoil stockpiles are created, they will need to be protected from erosion, and the locations need to be shown on a map. (PBB)

If soils are to be live hauled and placed on concurrent reclamation, please show the proposed areas of concurrent reclamation on the Phase 1 and Reclamation Map (DJ)

Section 106.2 states that all of the area covered by the Phase 1 pit is currently disturbed. Because this plan as submitted only covers Phase 1, please indicate where the 135,520 cy of growth material needed to reclaim the Phase 1 disturbance, will come from. Because the other phases of the mine have not been permitted, that resource would not be available until the other phases are mined. (DJ)

The planned highwall benches are wide enough that it is practical to distribute topsoil. Please include this commitment. As an alternative to benching, the highwall could be pushed down or mined to a 2.5h:1v or 3h:1v slope. (PBB)

The plan indicates 362 acres of the ultimate disturbed area would be composed of highwalls. Assuming soil can be spread over 22 feet of the 25-foot width of the benches, 55 percent of the highwall area or 200.75 acres could be topsoiled (22-foot bench width/40 foot total horizontal for each bench). Applying six inches of soil to this area requires 161,938 cubic yards of soil. (PBB)

The ultimate pit floor area upon the completion of Phase 5 would be 37 acres, and the pond on the west side of I-15 is 17 acres. It would require 43,560 cubic yards of soil to cover these areas six inches deep. Thus, the total volume of soil required for reclamation of the highwalls, the pit floor, and the fines pond is 205,498 cubic yards. (PBB)

To obtain this much soil from areas that are not yet disturbed would require salvaging an average of 7.5 inches from 205 acres. This is 25 percent more than the plan currently shows (six inches). Soils in all areas of the mine are described as "very deep," so it is likely this much soil exists. Please modify the plan accordingly. (PBB)

106.7 Existing vegetation - species and amount

The application needs to include baseline vegetation information adequate to establish a revegetation success standard. The plan contains general descriptions of the vegetation communities and a list of the dominant species but no quantitative data. This information is important both for the success standard and for developing the revegetation plan. (PBB)

It would be useful if the plan contained some basic vegetation information from the concurrent reclamation that has already been done. What species have been most successful? What reclamation/revegetation methods have been used, and how effective have they been? (PBB)

106.8 Depth to groundwater, extent of overburden, geology
The plan discusses the geology on a limited basis. It is important that a geologic model be derived that support the conclusions in the plan that there is not a direct connection between the Jordon River and the site. The deepest final elevation related to the pit is 4225 feet, whereas the Jordan River elevation is approximately 4490 feet, making the pit 265 feet deeper then the river. Although this does not necessarily mean the pit will create a groundwater gradient from the Jordan River. More detailed geologic information will be required before a determination on groundwater impact can be made.

It appears on Figure 2 that three wells exist on the property. The information contained in the plan on page 19 conflicts with the depth of the wells on the figures. Please correct one or the other on the figure or in the plan. On Figure 2 the following information was found. One 10 inch diameter well used for dust suppression was drilled to 950 feet and an 18 inch diameter well used for culinary purpose was drilled to 200 feet. One dry 8 inch diameter well was also shown.
Any off site wells but in the vicinity of the site need to be plotted on a larger scale map. Any related information on the formation or depth of those wells also needs to be documented in the plan.(TM)

106.9 Location & size of ore, waste, tailings, ponds
The location of ponds and impoundments are shown on the various figures.
Because the Phase 5 pit would be considered an impoundment, a Variance to *Rule R647-4-111.9. Dams and Impoundments* will be required per the requirements of Rule R647-4-112. Variance. (TM)

R647-4-107 - Operation Practices

107.1.14 Posting warning signs
This portion of the plan states warning signs will be placed where the public can access the site. Other areas of the plan state that warning signs will be placed every 150' around the site. Please make the plan consistent. (DJ)

107.4 Deleterious material safety stored or removed
Fuel storage tanks are noted as being located next to each crusher.

Containment capable of holding 110% of the capacity of the tanks is required. (DJ)

107.5 Concurrent reclamation
The plan states soil will be live hauled to areas being concurrently reclaimed.
No areas have been noted where this concurrent reclamation will take place. Please indicate areas where this activity will take place. If no areas are available for utilization of the soil resource, please indicate where topsoil stockpiles will be located. (DJ)

Please include a commitment to control weeds on the State noxious weed list. The plan says the operator will control weeds on the Salt Lake and Utah county noxious weeds lists, but the weeds being controlled should also include anything on the State list. (PBB)

The text of the plan indicates that GRP's air quality permit presently caps the open or disturbed area at the site to 112 acres.
Does this cap apply to only the east portion of the pit or the entire site?
The plan states 189 acres of the eastern portion of the site is presently disturbed and that does not include the acreage disturbed at the gravel pit on the west side of the road. Has GRP applied to expand their present AO permit? (DJ)

109.4 Slope stability, erosion control, air quality (fugitive dust control plan), safety
The plan indicates that as a protective measure boulders would be placed on the highwalls where runoff water would be expected to concentrate.
Please indicate on Figure 4 where these boulder piles will be located and include the cost of this activity in the surety. (DJ)

According to the plan, the safety berm/trench along the highwall will be used to retain ephemeral flows.
If the berms are going to be used to retain water, the design will need to be changed to facilitate the berms water-holding capacities. (DJ)

R647-4-110 - Reclamation Plan

110.1 Current & post mining land use
The surety indicates that 2500' of fencing will be constructed at the site.
Please show in Figure 4 where this fence will be installed. (DJ)

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed
Immediately under the statement on page 26 that there will be no waste dumps, the plan says that road spurs into the pit and dump areas would be reclaimed. Will there be dumps? If so, they should be shown on a map. And include the cost of reclamation of these sites in the surety. (PBB/DJ)

The plan states, " At the conclusion of the operations in Phase 1, all trash, oil, fuel, equipment, debris and structures would be removed from the site and the site prepared for reclamation".

Is the plan to remove all facilities at the conclusion of **Phase 1**? (DJ)

110.5 Revegetation planting program
Please show how concrete and asphalt stockpiles will be revegetated. The plan says no soil will be applied to these areas because the soil was not harvested before the stockpiles were established. Growth medium needs to be applied to these stockpiles so they can be revegetated. If a substitute soil is used, it may be necessary to apply composted manure. (PBB)

As discussed in Section 106.7 above, the results of past revegetation efforts should be used in developing or modifying the revegetation plan. (PBB)

The plan includes a commitment to apply composted manure to the topsoil at the rate of five tons per acre. "Topsoil" generally does not need addition of organic matter, and manure often encourages weed growth. The subsoil, however, is likely to have very few nutrients and low water holding capacity, and since it is less likely to have a bank of weed seeds, manure would likely be beneficial. The Division recommends not applying manure to topsoil, particularly if the soil is live hauled. If subsoil or other substitute topsoil is used, it should be evaluated for organic matter content and water holding capacity (field tests for color and texture should be adequate) to determine if composted manure is added. (PBB)

The species in the seed mix the operator proposes are acceptable, but the Division recommends that the mix be evaluated considering what species have been successful in concurrent reclamation. The plan needs to include rates of application for drill and broadcast seeding. (PBB)

The plan says seed would be drilled except in inaccessible areas. Some species in the seed mix, such as sagebrush, rabbitbrush, sand dropseed, Sand dropseed, and Junegrass, should not be drilled. In areas where a drill is used, these species should be broadcast. Alternatively, seed could be broadcast in all areas. If broadcasting of the seed is selected, the surety amount for this activity will need to be changed. (PBB/DJ)

In those areas where seed is broadcast, seeding needs to occur as soon as possible after surface preparation. This commitment should be in the plan. (PBB)

The Division recommends that the operator not use a sheep' s foot roller. Under the heading "Seed Bed Preparation," the plan says roughening will include hummocks and small depressions to provide soil catchments, water retention, and habitat niches. After seeding, a sheep's foot compactor would be used to create microniches. If the surface is left rough to begin with, and if seeding is done right after surface preparation, there should be no need to do further work. The sheep's foot roller would probably be counterproductive: it would tend to smooth out the hummocks and small depressions that are so important in retaining water. Please refer to The Practical Guide to Reclamation in Utah found on the Division's web site for preferred reclamation techniques. (PBB)

R647-4-111 - Reclamation Practices

111.7 Highwalls stabilized at 45 degrees or less
In Section 109.4, the plan says highwalls would be sloped back so the final slope angle is 45 degrees or **greater**, yet the plan does not include a variance request for this aspect of reclamation. (PBB)

R647-4-112 – Variance

The permitee should document the fact that the highwall in the northeast portion of the present pit was established prior to regulation by the Division. Unless these areas are disturbed during Phase 5 mining, further reclamation of these areas will not be required. (DJ)

The operator requests a variance from topsoil distribution requirements for the pit highwall benches but does not provide adequate justification or say what alternate methods would be used as required in R647-4-112.1.13 and -1.14. As discussed in Section 106.6, it does appear practical to distribute soil on part of the highwall benches. There may be some benches where this is not possible, and the Division anticipates it may be necessary to make this decision on a case-by-case basis. (PBB)

There does not appear to be any reason the highwall benches cannot be seeded. Please remove this variance request from the plan. (PBB)

The justification given for not seeding the highwall benches and for requesting a variance from revegetation success standards on the pit floor is that vegetation in adjacent areas is not comprised of desirable species for wildlife or open space. The plan says the interim native seed mix has been successful on areas with six inches of topsoil. These are not good reasons for not seeding the highwall benches or for not having a success standard for the pit floor, and the plan does not give an alternate method to be used. The pit floor should be able to achieve 70 percent of the cover of adjacent areas. (PBB)

R647-4-113 – Surety

Figure 2 shows a large concrete waste pile on the northern portion permit area.
The surety should include a line item for the removal or treatment of this pile. (DJ)

A paved road exists on the property between the dry mix concrete plant and the asphalt plant.
The surety should contain a line item for the removal and disposal of the asphalt. (DJ)

The plan discusses several generators located on the site.
These items need to be included in the equipment removal portion of the surety. (DJ)

Water from the water well is being utilized within the permitted area. If the well being used for this purpose is not bonded by UDWR, closure of the well need to be included in the surety. (DJ)

The plan states composted manure will be added to the topsoil at a rate of 5 tons/acre and mixed into the topsoil surface with a grader.
A line item for this activity needs to be added to the surety. (DJ)

Seeding is to be followed by "dimpling" the seeded surface with a sheep's foot compactor.
A sheep's foot compactor will need to be added to the equipment to be mobilized to the site. (DJ)
A line item for dimpling activity will need to be added to the surety. (DJ)

Seeding is to be accomplished using a seed drill.
A tractor and drill seeder will need to added to the equipment mobilized to the site. (DJ)

A line item for revegetation monitoring and weed control for the site needs to be added to the surety. (DJ)

Mobilization should include a fleet of 631 scrapers to spread the soil over the site. To spread the 135,500 cys of soil will require ~4400 passes by a 631 scraper. (DJ)

A push cat for the scrapers will be needed. (DJ)
A line item for the additional dozer time will need to be added. (DJ)

The cost for the 14' grader shown in the surety is $80.20/hr.
The cost for a 16H grader is $132/hr; please adjust the surety to reflect this change. (DJ)

The operating cost for a D11 is shown as $367/acre.
The cost reflected in the rental books for a D11R dozer is $595/hr; does the $367/acre take into account this rental/operating cost? (DJ)

The escalation rate used by the Division has been reduced from 4.44% to 1.2% (DJ)

R647-4-115 - Confidential Information

No confidential information was contained in the application. (DJ)